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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,097	02/09/2005	Yasushi Miyamoto	58575-308350	4392
43550	7590	01/16/2008		
FAEGRE & BENSON ATTN: PATENT DOCKING 2200 WELLS FARGO CENTER 90 SOUTH SEVENTH STREET MINNEAPOLIS, MN 55402-3901			EXAMINER EOFF, ANCA	
			ART UNIT 1795	PAPER NUMBER
			MAIL DATE 01/16/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/524,097	Applicant(s) MIYAMOTO ET AL.	
	Examiner Anca Eoff	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 02/09/2005, 10/13/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/13/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 and 4-22 are pending in the instant application. Claims 2-3 are canceled.
2. The foreign priority document JP 2002-236009, filed on August 13, 2002 was received and acknowledged. However, in order to benefit of the earlier filing date, a certified English translation is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraph of 35 U.S.C. 102 that forms the basis for the rejections under this section made in this Office action:

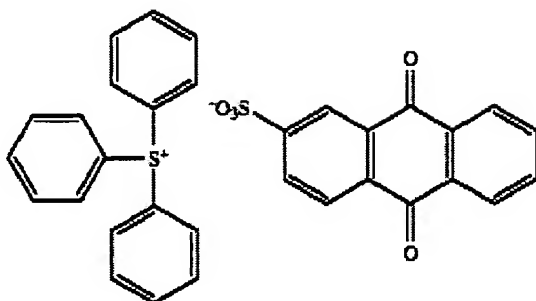
A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4-7, 9-11, 13-19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi (US Patent 5,965,319).

With regard to claim 1, Kobayashi discloses a negative type image recording material comprising:

- (A) an onium salt compound having sulfonic acid as counter ion, said onium salt generating a sulfonic acid by light or heat;
- (B) a crosslinking agent crosslinkable by an acid;
- (C) a polymer compound having alkaline-soluble groups, and
- (D) an infrared ray absorbing agent (abstract).

The onium salt (A) may be the compound of formula (I):



(I) (compound (IIa-31) in column 21).

Since the onium salt (I) has an anion comprising a chromophore anthraquinone group and a sulfonic acid group, the onium salt of formula (I) is equivalent to the onium salt of an acidic dye having a sulfonic group in the molecule of the instant application.

With regard to claim 4, Kobayashi further discloses that the polymer compounds having an alkaline-soluble groups may be novolak resins (column 38, lines 47 and 62).

With regard to claim 5, Kobayashi further discloses that the amount of alkaline soluble polymer compounds is 10 to 90% by weight, preferably 20 to 85% by weight and more preferably 30 to 80% by weight based on the total solid component of the image recording layer (column 39, lines 47-51).

With regard to claim 6, Kobayashi further discloses that the crosslinking agent may be a resol resin (column 29, lines 45 and 52).

With regard to claim 7, Kobayashi further discloses that the crosslinking agent is used in an amount of 5 to 70 % by weight based on the total solid component of the image recording material (column 37, line 66-column 38, line 42).

With regard to claim 9, the compound of formula (I) above is a sulfonium salt.

With regard to claims 10-11, Kobayashi further discloses that the compound (A) which generates a sulfonic acid by light or heat is added to the image recording layer in an amount of 0.01 to 50% by weight, preferably 0.1 to 25% by weight and more preferably 0.5 to 20% by weight based on the total solid component of the image recording layer (column 29, lines 37-40).

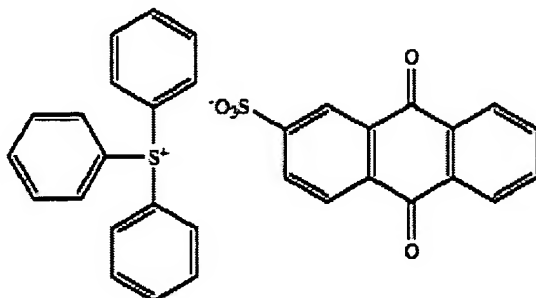
With regard to claim 13, Kobayashi further discloses that the infrared absorbing agent absorb infrared rays having a wavelength of 760 nm to 1,200 nm (column 39, lines 59-61).

With regard to claims 14-15, Kobayashi further discloses that the infrared absorbing agent may be a dye (column 40, line 32) or a pigment (column 40, line 38). The dyes and the pigments can be added in an amount of 0.01 to 50% by weight based on the total solid component of the image recording material, preferably in an amount of 0.5 to 10% by weight in case of a dye and 3.1 to 10% by weight in case of a pigment (column 41, lines 24-29).

With regard to claim 16, Kobayashi further discloses a planographic printing plate using the image recording material (column 44, lines 36-37) and a support, such as an aluminum plate (column 51, lines 53-56). The image recording material comprises:

- (A) an onium salt compound having sulfonic acid as counter ion, said onium salt generating a sulfonic acid by light or heat;
- (B) a crosslinking agent crosslinkable by an acid;
- (C) a polymer compound having alkaline-soluble groups, and
- (D) an infrared ray absorbing agent (abstract).

The onium salt (A) may be the compound represented by the formula (I):



(I) (compound (IIa-31) in column 21).

Since the onium salt (I) has an anion comprising a chromophore anthraquinone group and a sulfonic acid group, the onium salt of formula (I) is equivalent to the onium salt of an acidic dye having a sulfonic group in the molecule of the instant application

With regard to claim 17, Kobayashi further discloses that the infrared absorbing agent absorb infrared rays having a wavelength of 760 nm to 1,200 nm (column 39, lines 59-61).

With regard to claim 18, Kobayashi further discloses that the polymer compounds having an alkaline-soluble groups may be novolak resins (column 38, lines 47 and 62).

With regard to claim 19, Kobayashi further discloses that the crosslinking agent may be a resol resin (column 29, lines 45 and 52).

With regard to claim 21, Kobayashi further discloses that solutions comprising the components of the image recording materials are applied on an aluminum plate and dried to obtain a negative type planographic printing plate (column 51, lines 54-57). The solution is prepared by dissolving the components in an organic solvent, such as a

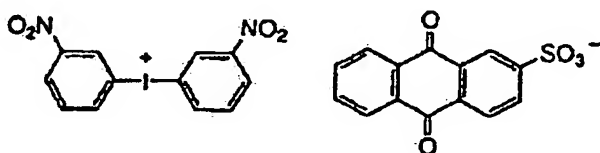
mixture of methyl ethyl ketone, 1-methoxy-2-propanol and methyl alcohol (table in column 52, lines 30-33).

4. Claims 1, 4-7, 9-11, 13-19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Oshima et al. (JP 11-084654).

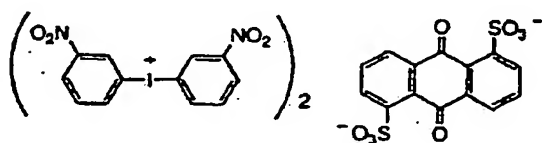
With regard to claims 1, 4, 6 and 13, Oshima et al. disclose a negative type image recording material comprising:

- (A) an onium salt compound (par.0008);
- (B) alkali soluble resin, which may be a novolak resin (par.0010, par.0045);
- (C) a crosslinking agent, which may be a resol resin (par.0010, par.0052), and
- (D) an infrared ray absorbing agent, which may be a dye or pigment absorbing infrared radiation with a wavelength between 760 nm and 1200 nm (par.0010, par.0063).

The onium salt (A) may be the compound represented by the formulas (II) or (III):



(II) (compound (17) in par.0038),



(III) (compound (18) in par.0038).

Since the onium salts (II) and (III) have anions comprising a chromophore anthraquinone group and sulfonic acid groups, the onium salts of formulas (II) and (III) are equivalent to the onium salt of an acidic dye having a sulfonic group in the molecule of the instant application.

With regard to claim 5, Oshima et al. disclose that the amount of alkaline soluble polymer compounds is 40 to 90% by weight based on the total solids in the image recording layer (par.0051).

With regard to claim 7, Oshima et al. disclose that the crosslinking agent is used in an amount of 5 to 70 % by weight based on the total solid component of the image recording material (par.0062).

With regard to claim 9, the compounds of formulas (II) and (III) above are iodonium salts.

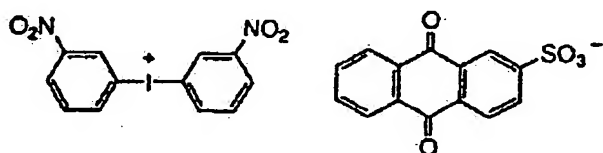
With regard to claims 10-11, Kobayashi further discloses that the compound (A) which generates a sulfonic acid by light or heat is added to the image recording layer in an amount preferably between 0.01 to 15% by weight based on the total solid component of the image recording layer (par.0044).

With regard to claims 14-15, Kobayashi further discloses that the infrared absorbing agent may be a dye or a pigment (par.0063) and they may be comprised in the image recording layer in an amount preferably between 1.0 and 10% by weight based on the total solid component of the image recording material (par.0071).

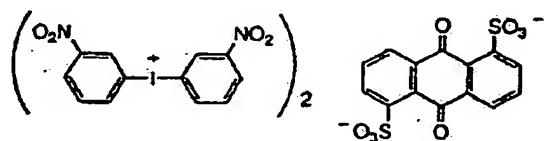
With regard to claims 16-19, Kobayashi further discloses a planographic printing plate using the image recording material and a support, such as an aluminum plate (par.0098). The image recording material comprises:

- (A) an onium salt compound (par.0008);
- (B) alkali soluble resin, which may be a novolak resin (par.0010, par.0045);
- (C) a crosslinking agent, which may be a resol resin (par.0010, par.0052), and
- (D) an infrared ray absorbing agent, which may be a dye or pigment absorbing infrared radiation with a wavelength between 760 nm and 1200 nm (par.0010, par.0063).

The onium salt (A) may be the compound represented by the formulas (II) or (III):



(II) (compound (17) in par.0038),



(III) (compound (18) in par.0038).

Since the onium salts (II) and (III) have anions comprising a chromophore anthraquinone group and sulfonic acid groups, the onium salts of formulas (II) and (III) are equivalent to the onium salt of an acidic dye having a sulfonic group in the molecule of the instant application.

With regard to claim 21, Kobayashi further discloses that a solution comprising the components of the image recording materials is applied on an aluminum plate and dried to obtain a negative type planographic printing plate (par.0098). The solution is prepared by dissolving the components in an organic solvent, such as a mixture of methyl ethyl ketone, 1-methoxy-2-propanol and methyl alcohol (par.0100).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

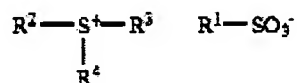
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8, 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (US Patent 5,965,319).

Kobayashi discloses that the onium salt (A) may be a compound having the structure represented by the formulas (IV)-(VI):



(IV) (general formula (I) in column 2, line 50);



(V) (general formula (II) in column 2, line 55), and



(VI) (general formula (III) in column 2, line 60), wherein R¹ represents a hydrocarbon group having 20 or fewer carbon atoms which may be substituted (column 2, lines 61-63) but fails to disclose an acid generator having an anionic portion with sulfonic groups and groups with 21 or more carbon atoms as required by the instant application.

However, based on Kobayashi's disclosure that an acid generator having an anionic portion with sulfonic groups and 20 carbon atoms is successfully used in the image recording material, it would have been obvious to one of ordinary skill in the art at the time of the invention to obtain an acid generator having an anionic portion with sulfonic groups and 21 carbon atoms.

"An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties." *In re Payne*, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979) (MPEP 2144.09-I Rejection Based on Close Structural Similarity is Founded on The Expectation That Compounds Similar in Structure Will Have Similar Properties).

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (US Patent 5,965,319) in view of Aoskima (US Pg-Pub 2003/0073032).

With regard to claim 12, Kobayashi disclose an image recording material comprising:

- (A) an onium salt compound having sulfonic acid as counter ion to generate sulfonic acid decomposed by light or heat;

- (B) a crosslinking agent crosslinkable by an acid;
- (C) a polymer compound having alkaline-soluble groups, and
- (D) an infrared ray absorbing agent (abstract).

However, Kobayashi fails to disclose that the image recording material comprises a mixture of compounds that generate acid upon heating.

Aoshima discloses a photosensitive layer for a negative planographic printing plate comprising an infrared absorber, a compound that generates a radical or acid due to heat, a polymerizable compound or a crosslinking compound (abstract). The composition may also comprise a binder (par.0035).

The acid generator include onium salts having as counter ion a sulfonic acid, such as an iodonium, sulfonium or diazonium salts (par.0096).

Aoshima et al. further disclose that the acid generators may be used alone or in combination of two or more (par.0102).

Since Aoshima teaches that two or more acid generators may be used in a photosensitive layer for a negative planographic printing plate, it would have been obvious to one of ordinary skill in the art at the time of the invention to use two or more acid generators in the image recording material of Kobayashi, with a reasonable expectation of success.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anca Eoff whose telephone number is 571-272-9810. The examiner can normally be reached on Monday-Friday, 6:30 AM-4:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AE



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